



United States Department of Agriculture Midwest Climate Hub

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A Field Day to the Long Term Agricultural Research Site Hamilton County, IA

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Soil erosion is quickly becoming a severe problem throughout the Midwest and the situation is predicted to worsen unless more sustainable management practices are adopted. Management practices like reduced tillage and cover crops are recommended to help present soil erosion, enhance soil quality, and reduce greenhouse gas emissions.



Photo by Erica Kistner, USDA-ARS, LTAR station, Hamilton, IA.

On Friday, Oct 14th, Dr. Kistner joined fellow USDA-ARS postdocs, to help take soil samples at a recently established Long Term Agricultural Research (LTAR) site in Hamilton, County Iowa. Soil samples from two traditionally managed Midwest row crop fields (2 year corn/ soy rotation with tillage) were taken from 8am to 1pm. Later this year, sections of these fields will be assigned different land management treatments including: 1) full tillage (control), 2) no tillage, 3) reduced tillage, and 4) rye cover crop. The effects of these treatments on overall soil health and soil carbon sequestration will continue to be monitored for the next 20 years on a yearly basis.

Ongoing climatic change in the Midwest will continue to bring more frequent and extreme precipitation events, especially in the spring time, which in turn leads to soil erosion in traditionally managed row crop systems. Soil erosion is quickly becoming a severe problem throughout the Midwest and the situation is predicted to worsen unless more sustainable management practices are adopted. Management practices like reduced tillage and cover crops are recommended to help present soil erosion, enhance soil quality, and reduce greenhouse gas emissions. The Midwest Climate Hub will continue to support research like USDA's LTAR that promotes climate resilient and sustainable agriculture.

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